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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,030	01/30/2004	Satoshi Oshima	16869S-104700US	7614
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/769,030	OSHIMA ET AL.
Examiner	Art Unit	
Yaima Campos	2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 26 July 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1,3-5 and 7-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-5, 7-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date: _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

1. As per the instant Application having Application number 10/769,030, the examiner acknowledges the applicant's submission of the amendment dated July 26, 2007. At this point, claims 1, 4, 7, 8, 10, 13, 16-18, 20 and 21 have been amended, claims 2 and 6 stand cancelled, and claims 22-23 have been added. There are 21 claims pending in the application; there are 8 independent claims and 13 dependent claims, all of which are ready for examination by the examiner. Claims 1, 3-5, and 7-23 are pending.

**REJECTIONS BASED ON PRIOR ART**

**Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-4, 9-15, and 17-23 are rejected under 35 U.S.C. 103(a) as being anticipated by Moshfegui et al. (US 6,779,119) in view of Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764).

4. As per claims 1, 10, 12-13, 17 and 22-23, Moshfegui discloses “A storage device/read-ahead method having a capability of learning access patterns, comprising:” [Moshfegui discloses “the invention relates to the field of computer systems, and in particular to systems with data access latency” (Col. 1, lines 9-10) wherein “a

**learning system may be used to predict which customer's record are going to be accessed next** (Col. 3, lines 53-55)]

**"a control unit;" [Moshfegui discloses the combination of "task processor 130," "data miner 140" and "prefetcher 120 having cache 180" (Figures 1-2 and related text)]**

**"a cache memory;" [Moshfegui discloses "cache 180" (Figure 1 and related text; Also see "caches" (Figure 3)]**

**"and a disk device;" [Moshfegui discloses "data files 225" storage (Figure 1); "graphics data 355" and "text data" storages (Figure 3)]**

**"wherein said control unit records access history information that identifies a data access pattern and, a history of data readout activity having been performed *by* the disk device *for* a plurality of computers connected to said storage device ["the data miner 140 processes a database that contains a history of usage of the system, hereinafter termed a usage log 150, for each user of the system... The entries in the usage log 150 include a subset of the commands, or requests, that each user has submitted in the past. In a preferred embodiment, each entry in the usage log 150 includes an identification of the user, the command, and the parameter, or arguments, associated with the command. The entry in a preferred embodiment also includes the date, time, and location of the user when the request was made" (Col. 2, lines 44-65) "Note that the term commands of interest is used herein in the general sense, and is intended to include files of interest, record of interest, and so on" (Col. 3, lines 15-18) wherein "for an individual user, the usage log may include time-dependent patterns, location-independent patterns, time-dependent patterns, location-dependent patterns, location-and-time-dependent patterns, and so on" (Col. 3, lines 19-26) and**

**explains “based on the user’s prior usage patterns, the system prefetches information in anticipation of the user’s request” (Col. 2, lines 7-9)]**

respectively reading out data from said storage device, based on predetermined information, including both a first information for specifying the access history and a second information indicating the specified computer, pre-reads data to be used by said one of said computers from said disk device to said cache memory, based on a command containing information for specifying said history and information for specifying and information for specifying said one of said computers, the command being received from a management computer communicating with the storage device *through a network*; determines data to be pre-read in accordance with said data access pattern and said history of data readout activity of said one of said computers; and [**“based on the user’s prior usage patterns, the system prefetches information in anticipation of the user’s request” (Col. 2, lines 7-9) wherein “the data miner 140 creates a set of anticipated commands 160 corresponding to the current user of the system 100. As a minimum, the set of anticipated commands 160 contains an identification of the command and any parameters required to effect the command” (Col. 3, line 63-Col. 4, line 1) “in accordance with one aspect of this invention, the prefetcher 120 selects one or more anticipated commands 161 from the set of anticipated commands 160 and submits tasks 162 to the task processor 130 for execution. This selection and submission is performed before the user submits a request 101 corresponding to this command 161. In response to this command, the task processor 130 effects the appropriate action, and provides a response 165 to the prefetcher 120... the prefetcher submits a download task 162 to the task processor 130 for that x-ray. The task processor 130 communicates with the server,**

receives the requested x-ray, and communicates the x-ray to the prefetcher 120 as a task response 165 in a cache memory 180, in anticipation of the request 101 from the user for a display of the x-ray" (Col. 4, lines 37-56). See (Figure 2) which depicts client-server computer system]

wherein the control unit records information on said history in a form of a table specifying a relationship among a history identifier, the data readout location into a predetermined unit for controlling the cache memory, as being linked with said information for specifying said history and said information for specifying said computer, and reads data from said disk device to said cache memory, based on said history linked with said information for specifying said computer and said information for specifying said history contained in said command in response to receiving said command from the management computer [With respect to this limitation, Moshfegui discloses "usage log 150" (*which corresponds to the claimed table*) containing usage history of the system for each user identified by user id (Col. 2, lines 44-65) and explains having data miner 140 create a set of anticipated commands corresponding to the current user of the system (Col. 3, line 53-Col. 4, lines 1) based on the usage pattern linked to this user (Col. 1, lines 3-20; Col. 3, lines 19-24) wherein "prefetcher" submits tasks to task processor and task processor provides data corresponding to the set of anticipated commands to prefetcher so that prefetcher stores this data in a cache memory, in anticipation of user requests (Col. 4, lines 38-56) (See Figures 1-2 and related text)].

Moshfegui does not disclose expressly classifying a plurality of computer into a plurality of groups, each of said plurality of groups being assigned a respective group identifier... including the group identifier for a first group of computers...pre-reads data to be used by said

first group of computers... at least one of said first group of computers accessing data stored at the data readout location, wherein the management computer being arranged to include a display screen on which information on the plurality of groups and the plurality of computers classified into said plurality of groups is displayed.

Hertz discloses classifying a plurality of computer into a plurality of groups each of said plurality of groups being assigned a respective group identifier... including the group identifier for a first group of computers...pre-reads data to be used by said first group of computers...through a network... at least one of said first group of computers accessing data stored at the data readout location as [“information maps so produced and the application of users’ target profile interest summaries to predict the information consumption patterns of a user allows for pre-caching of data at locations on the data communication network and at times that minimize the traffic flow in the communication network to thereby efficiently provide the desired information to the user and/or conserve valuable storage space by only storing those target objects (or segments thereof) which are relevant to the user’s interests” (Pars. 0020) (Figs. 1 and 2; Par. 0175) wherein “successful pre-fetching depends on the ability of the system to predict the next action or actions of the user... it is possible to cluster users into groups according to the similarity of their user profiles. Any of the well-known pre-fetching methods that collect and utilize aggregate statistics on past user behavior, in order to predict future user behavior, may be implemented in so as to collect and utilize a separate set of statistics for each cluster of users... in this way the system generalizes its access pattern statistics from each to similar users” (Par. 0216)].

Aderton discloses the management computer being arranged to include a display screen on which information on the plurality of groups and the plurality of computers classified into said plurality of groups is displayed as [“computer systems coupled to a network to be assigned management groups... Fig. 13, the update system may include a group manager screen 1300. Group manager screen 1300 may display a hierarchy of groups in a hierarchy window 1306. Additionally, a list of one or more computer systems assigned to a particular group may be displayed in a group members window 1308... list window 808 may also be displayed on group manager screen 1300” (Pars. 0092, 0100 and 0106)].

Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) are analogous art because they are from the same field of endeavor of computer networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the pre-fetching system as taught by Moshfegui, classifying a plurality of computer into a plurality of groups each of said plurality of groups being assigned a respective group identifier... including the group identifier for a first group of computers...pre-reads data to be used by said first group of computers...through a network... at least one of said first group of computers accessing data stored at the data readout location as taught by Hertz, and further the management computer being arranged to include a display screen on which information on the plurality of groups and the plurality of computers classified into said plurality of groups is displayed as taught by Aderton.

The motivation for doing so would have been Mosfegui discloses classifying a plurality of computer into a plurality of groups each of said plurality of groups being assigned a

respective group identifier... including the group identifier for a first group of computers...pre-reads data to be used by said first group of computers...through a network... at least one of said first group of computers accessing data stored at the data readout location is done to [**“allows for pre-caching of data at locations on the data communication network and at times that minimize the traffic flow in the communication network to thereby efficiently provide the desired information to the user and/or conserve valuable storage space by only storing those target objects (or segments thereof) which are relevant to the user’s interests”** (Par. 0020) wherein users are classified into groups in order to provide more generalized prefetching for a group of users (Par. 0216)] and Aderton discloses the management computer being arranged to include a display screen on which information on the plurality of groups and the plurality of computers classified into said plurality of groups is displayed is done to [**provide display of computer groups to a management computer (Par. 0092, 0100 and 0106)**].

Therefore, it would have been obvious to combine Moshfegui et al. (US 6,779,119) with Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) for the benefit of creating a system/method to obtain the invention as specified in claims 1, 10, 12-13, 17 and 22-23.

5. As per **claim 3 and 14-15**, the combination of Moshfegui, Hertz and Anderton discloses “A storage device according to claim 2, wherein said predetermined information includes information on time, and said control unit records said history as being linked with information for specifying said history and information for specifying said computer until a predetermined time” [**“the data miner 140 processes a database that contains a history of usage of the system, hereinafter termed a usage log 150, for each user of the system... The entries in the usage log 150 include a subset of the commands, or requests, that each user has submitted**

in the past. In a preferred embodiment, each entry in the usage log 150 includes an identification of the user, the command, and the parameter, or arguments, associated with the command. The entry in a preferred embodiment also includes the date, time, and location of the user when the request was made" (Col. 2, lines 44-65)].

6. As per claim 4, the combination of Moshfegui, Hertz and Anderton discloses "A storage device according to claim 3," [See rejection to claim 3 above] "wherein said predetermined information includes information for specifying a data storage location of said disk device, and said control unit records said history as being linked with said information for specifying said history and said information for specifying said computer from a time when one or more computers in said first group of computer specified by said information for specifying said computer reads out data stored at a data storage location of said specified disk device" [Moshfegui discloses "the data miner 140 processes a database that contains a history of usage of the system, hereinafter termed a usage log 150, for each user of the system... The entries in the usage log 150 include a subset of the commands, or requests, that each user has submitted in the past. In a preferred embodiment, each entry in the usage log 150 includes an identification of the user, the command, and the parameter, or arguments, associated with the command. The entry in a preferred embodiment also includes the date, time, and location of the user when the request was made" (Col. 2, lines 44-65) and explains "a particular user who is known to typically access image data 355 at server 331. In accordance with this aspect of the invention, if this user logs onto a client 311, for example, that is bound to server 321, the server 321 redirects the binding of the client 211 to server 32" (Col. 8, lines 34-39)]. See [Hertz (Pars. 0020, 0216) (Figs. 1 and 2; Par. 0175)].

7. As per claim 9, the combination of Moshfegui, Hertz and Aderton discloses “A storage device according to claim 1,” [See rejection to claim 1 above] “wherein the history is arranged to be recorded in form of a table specifying a relationship among a history ID, the data readout location and the computer using the data having been stored in the location” [“**in a preferred embodiment, each entry in the usage log 150 includes an identification of the user, the command, and the parameter or arguments associated with the command. The entry in a preferred embodiment also includes the date, time, and location of the user when the request was made**” (Col. 2, lines 55-59) wherein; for example, “**a particular user who is known to typically access image data 355 at server 331. In accordance with this aspect of the invention, if this user logs onto a client 311, for example, that is bound to server 321, the server 321 redirects the binding of the client 211 to server 32**” (Col. 8, lines 34-39)].

8. As per claim 11, the combination of Moshfegui, Hertz and Aderton discloses “A system according to claim 9,” [See rejection to claim 9 above] “wherein said management computer includes information about schedule of a designation to be transmitted to said storage device by said computer itself, and said management computer transmits said first command or second command to said storage device based on said schedule” [With respect to this limitation, Moshfegui discloses based on the user’s usage pattern, the cache maintains the information that is likely to be accessed wherein “the prefetching of anticipated commands provides for a reduction in the actual response time to a user request 101, as measured by the time duration between the submission of the request and the receipt of a response to this request 101” (Col. 6, lines 4-17) and also explains an administrator may have access to a scheduling program(Col. 8, line 65-Col. 9, line 3)].

9. As per claim 18, the combination of Moshfegui, Hertz and Aderton discloses the storage device according to claim 1, wherein the second information comprises a MAC (Media Access Control) address [With respect to this limitation, Moshfegui discloses “The entry in a preferred embodiment also includes the date, time, and location of the user when the request was made” (Col. 2, lines 44-65) wherein the location of the user corresponds to the client computer from which the user is accessing data (See figure 2 and related text). Applicant should note that this corresponds to a “MAC address” which is well known in the art to comprise the physical address of a device connected to a network].

10. As per claim 19, the combination of Moshfegui, Hertz and Aderton discloses the storage device according to claim 1, wherein the command comprises a PointRead-command for instructing the storage device to start a pre-read operation to be performed by the control unit in response to a predetermined condition having been defined in advance for starting the pre-read operation [“in accordance with one aspect of this invention, the prefetcher 120 selects one or more anticipated commands 161 form the set of anticipated commands 160 and submits tasks 162 to the task processor 130 for execution. This selection and submission is performed before the user submits a request 101 corresponding to this command 161. In response to this command, the task processor 130 effects the appropriate action, and provides a response 165 to the prefetcher 120... the prefetcher submits a download task 162 to the task processor 130 for that x-ray. The task processor 130 communicates with the server, receives the requested x-ray, and communicates the x-ray to the prefetcher 120 as a task response 165 in a cache memory 180, in anticipation of the request 101 from the user for a display of the x-ray” (Col. 4, lines 37-56)].

11. As per claims 20-21, the combination of Moshfegui, Hertz and Aderton these claims are rejected for the same reasons as recited above with respect to claims 1, 10m 13 and 17; further requiring wherein the second information comprises a MAC (Media Access Control) address [With respect to this limitation, Moshfegui discloses “The entry in a preferred embodiment also includes the date, time, and location of the user when the request was made” (Col. 2, lines 44-65) wherein the location of the user corresponds to the client computer from which the user is accessing data (See figure 2 and related text). Applicant should note that this corresponds to a “MAC address” which is well known in the art to comprise the physical address of a device connected to a network] and a PointRead-command for instructing the storage device to start a pre-read operation to be performed by the control unit in response to a predetermined condition having been defined in advance for starting the pre-read operation [“in accordance with one aspect of this invention, the prefetcher 120 selects one or more anticipated commands 161 form the set of anticipated commands 160 and submits tasks 162 to the task processor 130 for execution. This selection and submission is performed before the user submits a request 101 corresponding to this command 161. In response to this command, the task processor 130 effects the appropriate action, and provides a response 165 to the prefetcher 120... the prefetcher submits a download task 162 to the task processor 130 for that x-ray. The task processor 130 communicates with the server, receives the requested x-ray, and communicates the x-ray to the prefetcher 120 as a task response 165 in a cache memory 180, in anticipation of the request 101 from the user for a display of the x-ray” (Col. 4, lines 37-56)].

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) as applied to claims 1-2, 6, 9-13, 16 and 22-23 above, and further in view of Letwin (US 5,257,370).

13. As per claim 5, the combination of Moshfegui, Hetz and Aderton discloses “A storage device according to claim 4,” [See rejection to claim 4 above] but does not disclose expressly “wherein when a command of stopping record of said history is received, the record of said history is stopped.”

Letwin discloses “wherein when a command of stopping record of said history is received, the record of said history is stopped” as [With respect to this limitation, Letwin discloses that “when a read request is received, the range of data read and access time is monitored. Each access is recorded until the read operation is completed and detected” (Column 3, lines 43-46) as accessing data within a predetermined amount of time and having “detecting” means to detect when a data access takes more time than a predetermined amount of time. Letwin and also discloses blocking “further operation until the read operation is complete” (Column 5, lines 32-33) as equivalent to having a stop command to stop recording data].

Letwin (US 5,257,370), Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) are analogous art because they are form the same field of endeavor of data accessing and/or computer networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the Moshfegui, Hertz and Aderton and make the data to a data prereading method of a disk device, which prereads data based on access history as taught by Moshfegui,

Hertz and Aderton and further limit the time for every access to data as taught by Letwin so that “wherein when a command of stopping record of said history is received, the record of said history is stopped”.

The motivation for doing so would have been because Letwin teaches that having a predetermined time for each data access wherein [**“a method and means for determining past-access behavior by a time a file is opened; thus eliminating the delay typically required to create a past behavior log” (Column 2, lines 4-8) and also explains that this “improves the speed and performance of a computer system” (Column 2, lines 34-35)**]

Therefore, it would have been obvious to combine Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041), Aderton, et al. (US 2004/0054764) and Letwin (US 5,257,370) for the benefit of creating a data storage prereading system/method to obtain the invention as specified in claim 5.

14. Claim 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) and Letwin (US 5,257,370) as applied to 5 above; respectively, and further in view of Kedem et al. (US 2003/0037202).

15. As per claims 7 and 8, the combination of Moshfegui, Hertz, Aderton and Letwin discloses “A storage device according to claim 4,” [See rejection to claim 4 above] but fails to disclose expressly that “an operating system program to be used by said specified computer is stored in a location specified by the information for specifying the data storage location of said disk device”.

Kedem discloses “an operating system program to be used by said specified computer is stored in a location specified by the information for specifying the data storage location of said disk device” as [**“The present invention is generally related to persistent storage devices, and, more specifically, to a system and method for enabling the centralized storage and maintenance of persistent storage device data images”** (Page 1, Paragraph 0003) and also teaches that **“DIMS is capable of updating the cached data image at its convenience, that is in a pull rather than a push mode, the DIMS allows all of a computer’s software (operating system, software applications, and other data) to be installed and maintained at a remote site”** (Page 8, Paragraph 0110)].

Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) Aderton, et al. (US 2004/0054764), Letwin (US 5,257,370) and Kedem et al. (US 2003/0037202) are analogous art because they are from the same field of endeavor of memory accessing.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Moshfegui, Hertz, Aderton, Letwin and Kedem to make the data prereading method of a disk device, which prereads data based on access history as taught by Moshfegui, Hertz, Aderton and Letwin, further include the ability of taking information specifying each host/client/requesting computer into account when more than one host computer is used, as disclosed by Moshfegui, Hertz, Aderton, and Letwin and further make “the data” that is to be accessed/preread be data dealing with a computer’s software such as operating system, software applications and other data as specified by Kedem.

The motivation for doing so would have been because Kedem teaches that having a computer’s software such as operating system, software application and other data stored at

remote locations [“gives users unprecedented benefit as it requires no support from the local operating system or application software” (Page 8, Paragraph 0110) and also explains that “because the physical data image is stored remotely, operating systems, applications and other data may be updated on the remote persistent storage device(s) by Information Technology (IT) professionals (through high-level interfaces such as NTFS)” (Page 8, Paragraph 0110)].

Therefore, it would have been obvious to combine Kedem et al. (US 2003/0037202) with Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) and Letwin (US 5,257,370) for the benefit of creating a data storage prereading system/method to obtain the invention as specified in claims 7 and 8.

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) as applied to claim 10 above, and further in view of Omura et al. (US 5,687,347).

17. As per claim 16, the combination of Moshfeghi, Hertz, and Aderton discloses “A system according to claim 10,” [See rejection to claim 10 above] but does not disclose expressly “wherein said management computer classifies said plurality of computers into a plurality of groups when registering said computers.”

Omura discloses, “wherein said management computer classifies said plurality of computers into a plurality of groups when registering said computers” as [With respect to this limitation, Omura discloses “the present invention relates to a data providing device and a file server device” using a “data transfer control method for prefetching data from a storage device” (Column 1, lines 8-9 and 12-13). Omura further explains having a “request

**input section for receiving data request commands, sent over a network from a plurality of data request sections of a plurality of data request devices” and also discloses “a request-command storing section for storing the data request commands received by the request input section by grouping the request commands for each data request section of each data request device” (Column 4, lines 31-39)] “a request-command storing section for storing the data request commands received by the request input section by grouping the request commands for each data request section of each data request device” (Column 4, lines 31-39)].**

Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041), Aderton, et al. (US 2004/0054764) and Omura et al. (US 5,687,347) are analogous art because they are from the same field of endeavor of computer memory access and control.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Moshfegui, Hertz and Aderton with Omura et al. (US 5,687,347) and make the data to a data prereading method of a disk device, which prereads data based on host access history as taught by Moshfegui, further include the ability of “wherein said management computer classifies said plurality of computers into a plurality of groups when registering said computers.

The motivation for doing so would have been because Omura teaches that [**“the file server device of the invention has the advantage that the number of terminals that can be attached can be further increased compared to the prior art device” (Column 5, lines 37-39).** Omura also teaches that identifying a “requesting device” aids in determining whether a certain device was “previously requested by that terminal” (Column 5, line 43) so that

**“prefetching can be performed with well-balance for a plurality of terminals, that data can be transmitted at equal rates, and that the speed of processing can be improved” (Column 6, lines 7-9)].**

Therefore, it would have been obvious to combine Omura et al. (US 5,687,347) with Moshfegui et al. (US 6,779,119), Hertz (US 2003/0037041) and Aderton, et al. (US 2004/0054764) for the benefit of creating a data storage prereading system/method to obtain the invention as specified in claim 16.

#### **ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT**

##### ***Response to Amendment***

18. The arguments filed on July 26, 2007 with respect to classifying computers into groups have been considered but are moot in view of the new ground(s) of rejection.
19. The arguments filed on July 26, 2007 with respect to Letwin have been considered but are not persuasive
20. As required by M.P.E.P. § 707.07(f), a response to these arguments appears below.

#### **ARGUMENTS CONCERNING PRIOR ART REJECTIONS**

21. Claims must be given the broadest reasonable interpretation during examination and limitations appearing in the specification but not recited in the claim are not read into the claim (See M.P.E.P. 2111 [R-1]).

#### **FIRST POINT OF ARGUMENT**

22. Regarding Applicant's remark that Letwin does not disclose *a command to stop recording history data* as Letwin simply discusses suspending I/O requests to a disc while a read operation is being performed; the Examiner respectfully disagrees. According to the broadest reasonable interpretation given to the claim language, Letwin discloses a command to stop recording history data as [**“when a read request is received, the range of data read and access time is monitored. Each access is recorded until the read operation is completed and detected”** (Column 3, lines 43-46) as accessing data within a predetermined amount of time and having “detecting” means to detect when a data access takes more time than a predetermined amount of time. Letwin and also discloses blocking “further operation until the read operation is complete” (*wherein blocking operation corresponds to stopping*) (Column 5, lines 32-33) as equivalent to having a stop command to stop recording data wherein “a method and means for determining past-access behavior by a time a file is opened; thus eliminating the delay typically required to create a past behavior log” (Column 2, lines 4-8) and also explains that this “improves the speed and performance of a computer system” (Column 2, lines 34-35)]. Applicant should note that in order to block/stop recording history data/any type of data, an instruction/command must inherently be issued.

23. All arguments by the applicant are believed to be covered in the body of the office action; thus, this action constitutes a complete response to the issues raised in the remarks dated July 26, 2007.

**CLOSING COMMENTS**

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

25. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Examiner's Note**

26. Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

**Conclusion**

**a. STATUS OF CLAIMS IN THE APPLICATION**

27. The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

**a(2) CLAIMS REJECTED IN THE APPLICATION**

28. Per the instant office action, claims 1, 3-5, and 7-23 have received an action on the merits and are subject of a final rejection.

**b. DIRECTION OF FUTURE CORRESPONDENCES**

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaima Campos whose telephone number is (571) 272-1232. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.

**IMPORTANT NOTE**

30. If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Sanjiv Shah, can be reached at the following telephone number: Area Code (571) 272-4098.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions

on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 4, 2007



Yaima Campos  
Examiner  
Art Unit 2185



SANJIV SHAH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100